

Application No.: 09/900,054

Docket No.: JCLA6831-R

REMARKS**Present Status of the Application**

Claims 1-12 remain pending in the application. The Final Office Action dated September 08, 2003 rejected all the pending claims 1-12 under 35 USC 103(a) as being unpatentable over Egawa et al. (US Patent No. 6,376,278) in view of Belke Jr. et al. (US Patent No. 6,326,241) and Hung (US Patent No. 6,380,624).

In view of the following remarks, reconsideration and allowance of the claims are respectfully requested.

Discussion of rejection under 35 USC 103

Claims 1-12 were rejected under 35 USC 103(a) as being unpatentable over Egawa et al. (US Patent No. 6,376,278) in view of Belke Jr. et al. (US Patent No. 6,326,241) and Hung (US Patent No. 6,380,624).

The Office Action rejected claims 1-12 based on exactly the same rejection reasons used in the Final Office Action dated January 15, 2003. However, no response or extra comments were cited in this Office Action in view of the amendments filed on June 13, 2003. Applicant respectfully believes that the Office Action does not provide sufficient information to support the obvious rejections, especially failing to properly identify the alleged comparable elements to the limitations of the claims.

Applicant respectfully submits that the previously amended claims 1 and 7 patentably distinguish over the cited references for at least the following reasons.

As recited in the previously amended claims 1 and 7, each of the substrates to be mounted

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on the single wafer includes *a plurality of package units, each package unit corresponding to one chip of the wafer*. As a result, when the substrates are mounted on the wafer, a plurality of chips are simultaneously assembled (which reduces the process time), and the gaps between the substrates further allow favorable filling of the underfill material.

None of the relied prior art references adequately teach or suggest at least these above features.

Nothing is taught or suggested in Egawa's disclosure in relating to "providing a plurality of individual substrates, each substrate including a plurality of package units, each package unit corresponding to one chip of the wafer" as claimed in this invention. Egawa merely teaches a manufacturing process of flip chip packages in which, as illustrated in FIG 2(A) through FIG 2(C), each wiring substrate 28 corresponds to a single chip 18. Clearly, this wiring substrate 28 of the prior art does not meet the claim limitation wherein *each substrate includes a plurality of package units, each package unit corresponding to one chip*. Moreover, each wiring substrate 28 is mounted to one individual chip 18 **after** the wafer 10 is diced into separated chips 18, which is contradictory to the teachings of the claimed invention. It is noted that Egawa et al. further discloses a variant assembly process in which, as illustrated in FIG. 8(A) through FIG 8(C), one single substrate 62 including a plurality of device regions 66 is mounted on the wafer 10. This teaching is also deficient to meet the claim limitation wherein *a plurality of substrates, each substrate respectively including a plurality of packaging units, are mounted on the wafer with a gap separating two adjacent substrates*, as recited in the claims.

Especially, the Office Action fails to specify the necessary information of the alleged comparable elements to the package unit of the substrate as claimed in this invention, thus failing

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to provide sufficient information for supporting the obviousness rejection.

Furthermore, Applicant respectfully points out that it is improper to select and combine parallel and non-coexistent process steps from Egawa's embodiments, since the proposed modification would destroy primary advantages of the respective embodiments. The Office Action is urged to avoid the temptation of using the claims as a blueprint to pick and choose isolated features from the reference to achieve the claimed combination.

Belke Jr. et al. is relied upon for teaching the provision of a plurality of bonding pads on the substrate, and the formation of bumps on the bonding pads. In addition, Hung is relied upon for teaching the construction of the substrates, including patterned copper films alternately laminated with insulating layers.

It is noted that none of the above secondary references adequately teach, suggest or motivate the claimed invention wherein "*a plurality of substrates are mounted on a wafer, each substrate including a plurality of packaging units respectively corresponding to the chips of the wafer*". Therefore, even if they are combined with one another, it is submitted that none of the relied references adequately teach or suggest all the claim limitations as emphasized above.

As a result, Applicant submits that claims 1 and 7 patently define over the cited reference. Regarding the rejection under 35 USC 103(a), the Applicants submit that dependent claims be patentably distinguishable over the cited references for at least the same reasons as the independent claims 1 and 7, from which these claims respectively depend, as well as for the additional features that these claims recite.

In view of the above amendment and discussions, reconsideration and withdrawal of the 103 rejections are respectfully requested.

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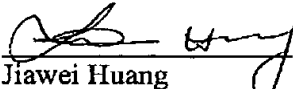
CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-12 of the present application patentably define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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